monoxide to a reaction zone heated at 900-1500 °C. The raw material is then made in contact with a catalyst made of a super fine metal in the reaction zone at 900-1500 °C. Examples of the catalyst are iron, nickel, and iron-nickel alloy in particle diameter of 100-300 angstroms. Upon the contact, the raw material is thermally decomposed to form vapor-phase growth carbon fibers.--

IN THE CLAIMS:

Please cancel claims 3 and 4 without prejudice or disclaimer.

Please amend Claims 1, 2, 5-19 as follows. A marked-up copy of the claims showing the changes made below is submitted herewith.

A1

1. (Amended) A porous secondary battery electrode made of an electrode material of a carbon-carbon composite material in which 30-90 wt% of the carbon-carbon composite material are vapor-phase growth carbon fibers uniformly dispersed in a carbon matrix, the vapor-phase growth carbon fibers having a diameter of 0.01-0.5 μm and a length of 5-300 μm.

2. (Amended) A secondary battery electrode according to Claim 1, wherein said vapor-phase growth carbon fibers are subjected to graphitization at a temperature of 2000°C or above.

A2

5. (Amended) A secondary battery electrode according to Claim 1, wherein said vapor-phase growth carbon fibers is further limited to 50-80 weight % of the carbon-carbon composite material.

6. (Amended) A secondary battery electrode according to Claim 1, wherein said carbon-carbon composite material is subjected to graphitization at a temperature of 2000°C or above.

7. (Twice Amended) A method for producing the porous secondary battery electrode as set forth in claim 1, comprising:

intermixing a synthetic resin with said vapor-phase growth carbon fibers having a diameter of 0.01-0.5 μm and a length of 5-300 μm, wherein the vapor-phase growth carbon fibers are uniformly dispersed in said synthetic resin to obtain a mixture:

molding said mixture into a predetermined shape to form an intermediate molded product; and

heating said intermediate molded product at a heating speed of 1 °C to 10°C/min to turn it into a non-vitreous, porous carbon-carbon composite.

8. (Amended) A method for producing the secondary battery electrode according to Claim 7, further comprising a step of graphitizing at a temperature of 2000°C or above said vapor phase growth carbon fibers prior to intermixing with a synthetic resin.

9. (Amended) A method for producing the secondary battery electrode according to Claim 7, wherein said heating step at high temperature includes two steps

of carbonization at the proximity of 1000°C and graphitization at a temperature of 2000°C or above.

10. (Amended) A secondary battery comprising:

the electrode as set forth in Claim 1 as a positive electrode;

a negative electrode; and

an electrolyte into which said positive electrode and said negative electrode are immersed.

11. (Amended) A secondary battery according to Claim 10, wherein said negative electrode is made of a carbon-carbon composite material in which vapor-phase growth carbon fibers are uniformly dispersed in a carbon matrix.

12. (Amended) A secondary battery according to Claim 10, wherein said negative electrode is a metal lithium plate.

13. (Amended) A secondary battery according to Claim 10, wherein said battery is a lithium secondary battery.

14. (Amended) A secondary battery according to Claim 13, wherein said electrolyte contains lithium perchlorate.

15. (Amended) A secondary battery according to Claim 10, wherein said vapor-phase growth carbon fibers are subjected to graphitization at a temperature of 2000°C or above.

16. (Amended) A secondary battery according to Claim 10, wherein a precursor of said carbon matrix is a synthetic resin.

A2 Cont.

17. (Amended) A secondary battery according to Claim 10, wherein a formulation amount of said vapor-phase growth carbon fibers is 30-90 weight %.

18. (Amended) A secondary battery according to Claim 10, wherein a formulation amount of said vapor-phase growth carbon fibers is 50-80 weight %.

19. (Amended) A secondary battery according to Claim 10, wherein said carbon-carbon composite material is subjected to graphitization at a temperature of 2000°C or above.

Please add new claims 20-22 as follows:

20. (New) A secondary battery electrode according to claim 1, wherein said vapor-phase growth carbon fibers are subjected to carbonization at a temperature of at least 1000°C.

A3